REMARKS

Claims 3-5, 7-10, 15-17 and 19-20 have been amended to remove multiple dependencies. Applicant believes that no additional fees are due upon filing this Amendment, however, should the Commissioner determine that additional fees are due, the Commissioner is hereby authorized to charge such fees to Deposit Account No. 50-0388.

Respectfully submitted,
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3.   (Once Amended)   A method according to claim 1 [or claim 2] in which the calculated relationship is based on functions addressing one or more of the density, emission path length in the sample and sample absorption of emissions.

4. (Once Amended)   A method according to [any preceding] claim 1 in which the calculated relationship is based on functions addressing one or both of the effect of the material forming the sample over the emission path length in the sample and the sample absorption of emissions.

5. (Once Amended)   A method according to [any preceding] claim 1 in which the calculated relationship is based on the equation:-

$$T_i = \exp \quad -\sum q_j . \mu_{i,j}$$

where T_i is the transmission coefficient at the energy i under consideration; q_j is the effective material thickness or the effect of the specified material forming the sample over the specified emission path length through the sample, for element j; $\mu_{i,j}$ is the mass absorption coefficient for elements j at energy i.

7. (Once Amended)   A method according to claim 5 [or claim 6] in which the elements include at least one low atomic mass element, preferably less than 10, at least one high atomic mass element, preferably greater than 40 and at least one intermediate atomic mass element, preferably between 10 and 50.

8. (Once Amended) A method according to [any preceding] claim 1 in which the adjusting of the variables / functions / factors varies one or two of the variables / functions / factors only.

9. (Once Amended) A method according to [any preceding] claim 1 in which the reduction in the differences between the first relationship value and calculated value is undertaken so as to reduce the overall difference between all of the first relationship and calculated relationship values involved.

10. (Once Amended) A method according to [any preceding] claim 1 in which the first relationship employs measured transmission coefficients.

15. (Once Amended) A method according to claim 13 [or claim 14] in which the generator emits energies encompassing the range of energies emitted by the sample.

16. (Once Amended) A method according to [any of claims] **claim** 13 [to 15] in which at least 5 energies from the generator are detected and used.

17. (Once Amended) A method according to [any of claims] **claim** 13 [to 16] in which the method further provides that the detected portion of the source emissions relate to a detected level for the sources in a sample, the detected level being corrected according to a correction method to give a corrected level for the sources in a sample, the process being repeated for one or more other samples.

19. (Once Amended) A method according to claim 17 [or claim 18] in which for correction of source emission energies corresponding to a generator energy the measurement based correction factor for that respective energy is used.

20. (Once Amended) A method according to [any of claims] **claim** 17 [to 19] in which correction of source emission energies not corresponding to a generator energy is achieved using a correction factor based on the extrapolation of the correction factors based on measurements for two or more of the respective energies.